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ABSTRACT

This guide, designed to help institutions plan integrated information systems which will enable them to meet their needs for data on foreign students was developed during a 3-day seminar in February, 1984. The first of five chapters provides a brief introduction on how to use the planning guide. Chapter 2 contains information designed to guide the systems analyst in working with the foreign student adviser and foreign admissions officer to establish a system which will aid the institution in meeting mandatory external reporting requirements, as well as internal planning and administrative needs. Chapter 3 introduces the basic concepts of computerization and system design and provides guidance on the options available. The special needs of the foreign student office are discussed in chapter 4. Tips are provided for foreign student advisers for coordination with other departments, as well as the systems department, in collecting and using data. The final chapter provides a summary of what a model foreign student information system might look like. Appendices include resource lists of useful references and organizations which may be of assistance. In addition, a description is given of coding systems which are currently available for foreign countries, fields of study, and foreign educational institutions. Contains a 25-item bibliography. (GLR)

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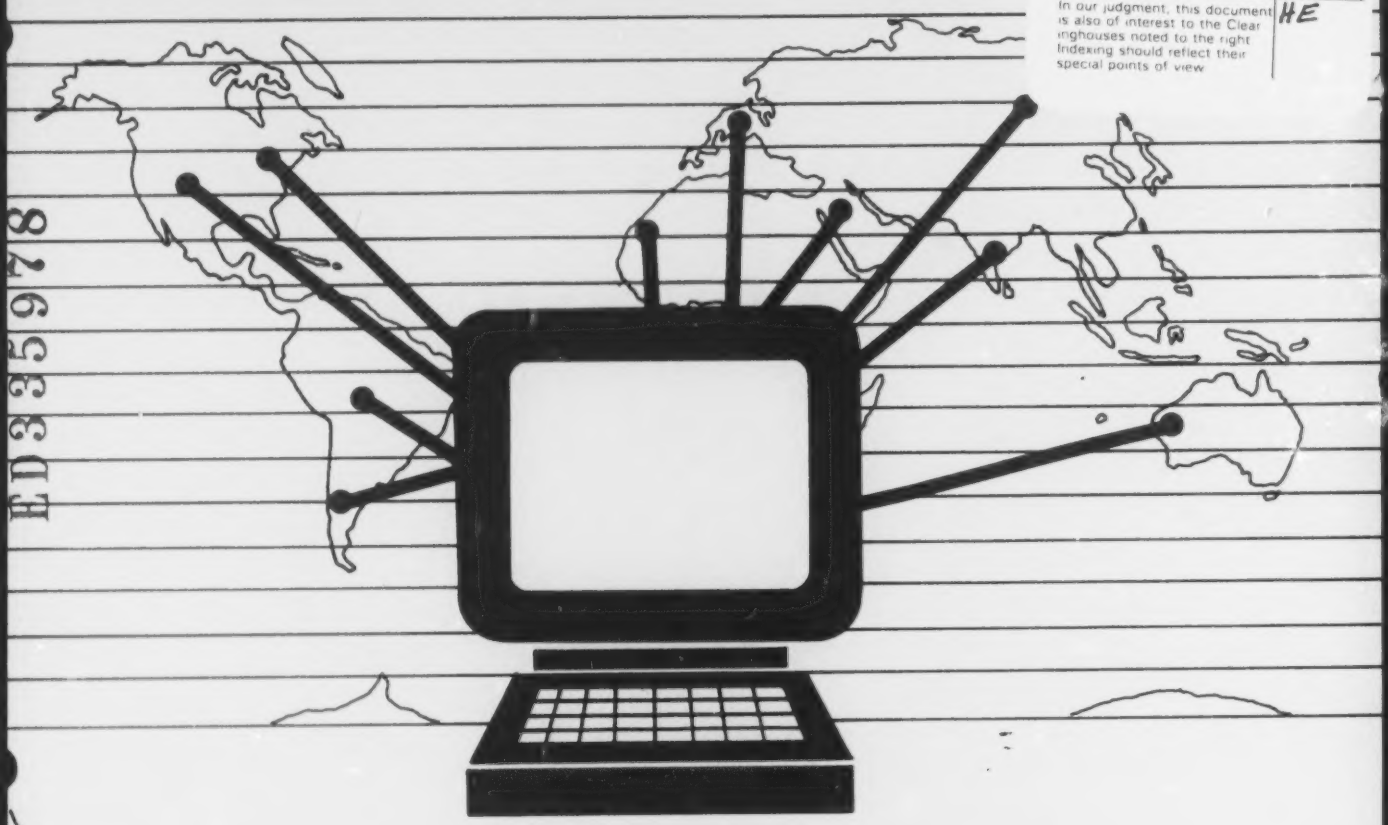

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Computer Systems for International Education

Prepared by the
Interassociational Committee on
Data Collection:

American Association of Collegiate Registrars
and Admissions Officers

Institute of International Education

National Association for Foreign Student Affairs

1985

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COMPUTER SYSTEMS FOR INTERNATIONAL EDUCATION

Prepared by the
Interassociational Committee on Data Collection:

American Association of Collegiate Registrars and Admissions Officers
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National Association for Foreign Student Affairs

1985

The National Association for Foreign Student Affairs is a nonprofit membership association that provides training, information and other educational services to professionals in the field of international educational exchange.

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PREFACE

The Interassociational Committee on Data Collection (ICDC) was formed in 1974 and is composed of representatives of the American Association of Collegiate Registrars and Admissions Officers (AACRAO), the Institute of International Education (IIE), and the National Association for Foreign Student Affairs (NAFSA). ICDC receives financial support through the Division of Student Support Services of the U.S. Information Agency and has the following as its major objectives:

(1) determining how best to respond to institutional and governmental needs for data on international educational interchange;

(2) providing guidance to AACRAO and NAFSA members on the collection of appropriate data; and,

(3) advising and assisting IIE in the collection, analysis, and publication of data on international educational interchange (e.g., as published in Open Doors).

In 1983, ICDC published a Guide for Collection of Data on Foreign Students. The guide was an attempt to assist foreign admissions officers and foreign student advisers in determining what elements of data on foreign students need to be collected by colleges and universities where foreign students are enrolled.

This publication takes the data collection guide a step farther. It is intended to help professionals in international educational exchange understand concepts of computerization and precepts of system development, and to help computer systems analysts understand the needs for data specific to foreign students and the special characteristics of systems which will accommodate these needs. An updated data collection guide has been incorporated into this text.

This document was written during a three-day seminar which took place in Austin, Texas in February 1984. The seminar, which was conducted under the auspices of the NAFSA Field Service, brought together 15 foreign student advisers, admissions officers, systems analysts and representatives of national organizations concerned with international education. Participants in that seminar are the authors of this document. They are:

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Judy Young, Director, International Office, University of Texas at Arlington.

Three of the participants, Michael Dean, Steve Watson and Mary Peterson, edited the output of the seminar. Barbara Scarborough of the University of Texas produced the publication text and deserves much credit for its polished final appearance.

Financial support for this publication was provided by the College Board, the U.S. Information Agency, and the University of Texas at Austin. ICDC is grateful to them, and hopes that this publication will enable U.S. colleges and universities to provide better services to foreign students, data for continuing research, and more accurate and comprehensive data for Open Doors.

Readers are invited to send comments to ICDC, using the form provided at the back of this book. ICDC will use reader feedback in updating the document.

Bill Paver
Austin, Texas

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I. INTRODUCTION

How to Use this Guide

This guide has been prepared in an effort to help institutions plan integrated information systems which will enable them to meet their needs for data on foreign students. In addition to information on basic reporting requirements, this document offers a broad planning guide for a complete information system on foreign students. Supplementary chapters are planned to deal with collection of data on foreign scholars and on U.S. students abroad.

Individual differences among campuses and their systems are vast. A document such as this cannot address every campus problem. An attempt has been made to give direction for planning, as well as to identify specific data elements in hopes that each campus may be able to adapt all or part of the guide to its needs.

Systems Analysts will find information on data elements specific to foreign students in **Chapter II**. This chapter contains information designed to guide the systems analyst in working with the foreign student adviser and foreign admissions officer to establish a system which will aid the institution in meeting mandatory external reporting requirements, as well as internal planning and administrative needs.

Foreign Student Advisers and **Foreign Admissions Officers** will find an introduction to basic concepts of computerization and system design in **Chapter III**. Whether the institution is fully automated with a centralized system, is modifying its current system, or is recommending an interim stand-alone system for foreign student records, this chapter will help guide you in making decisions about the options available to you.

The special needs of the **Foreign Student Office** are dealt with in **Chapter IV**. Foreign student advisers will find tips for coordination with other departments, as well as the systems department, in collecting and using data.

A summary of what a model **Foreign Student Information System** might look like is given in **Chapter V**. This chapter will provide a focus for discussion among systems analysts and international educators.

Appendices to this volume include a list of useful references and a list of organizations which may be able to assist you. In addition, you will find a description of coding systems which are currently available for foreign countries, fields of study, and foreign educational institutions. A copy of the report format to be required by the U.S. Immigration and Naturalization Service is also included, along with the text of the immigration regulations pertaining to the collection of data and the reporting required relative to foreign students. Two sample forms have been included to demonstrate how requests for assistance from a systems department can be made.

II. COLLECTING DATA ON FOREIGN STUDENTS

A. Why Collect Specific Data on Foreign Students?

Recent changes in the federal regulations governing the Immigration and Naturalization Service (INS) F-1 and M-1 nonimmigrant classification programs make schools legally responsible for collecting, storing, processing, and disseminating data on their nonimmigrant foreign student populations. The regulations (see Appendix 1) mandate the following:

1. a one-time recertification of each school by INS which gives the school permission to enroll foreign students

2. new reporting requirements which make the school and its designated officials legally responsible for keeping data not previously requested by INS. These elements are:

   - form I-20 ID admission number
   - country of citizenship
   - address and telephone number
   - status, i.e., full-time or part-time
   - course load
   - date of commencement of studies
   - degree program and field of study
   - expected date of completion
   - nonimmigrant classification
   - termination date and reason, if known
   - record of the written application, the student's transcripts or other records of courses taken, proof of financial responsibility for the student, and other supporting documents which have been received, reviewed, and evaluated at the school's location in the United States
   - information specified by the Service as necessary to identify the student, such as date and place of birth, and immigration status.

The INS has designed a new format for reports to be submitted periodically by all schools enrolling foreign students (see Appendix 2). Failure to comply with these new regulations will result in the withdrawal by INS of a school's approval to enroll foreign students. These increased legal obligations make it advisable for colleges and universities to develop efficient monitoring and reporting systems capable of handling data specific to the foreign student population.

In addition to the new federal immigration regulations, there are other external reports which require the institution to maintain an information system that can accommodate data unique to foreign students. These other reports include state tuition disbursement; Open Doors, the annual census of foreign students; contracts and grants; HEGIS reports; and agency report requests. Research on international educational exchange is based on data collected by individual colleges and universities. Accurate and uniform data are essential to these efforts.

Internally, reports on foreign students may be needed for:

- academic advising and monitoring of individual students
- recruitment planning
- enrollment planning
- interest group activity planning
- grant proposals
- fiscal planning
- alumni efforts.

B. Defining "Foreign Student"

Collecting and using data to work with foreign students assumes a shared understanding of who foreign students are. Broadly speaking, a *foreign student*

a. is a citizen of another country

b. is in the United States primarily for the purpose of studying

c. has a nonimmigrant status (student - F or M, exchange visitor - J, etc.)

d. has indicated an intention to leave the U.S. upon completion of studies.

A major problem in developing a foreign student information system is the fact that the term "foreign student" needs to be defined in different ways for different purposes. For example, Open Doors, the annual census of foreign students at U.S. colleges and universities which is sponsored by the Interassociational Committee on Data Collection and produced by the Institute of International Education, states the following:

> *A foreign student has been defined as anyone who is enrolled in courses in the United States who is not a citizen or an immigrant (permanent resident). Refugees are included.*

The new (1983) immigration regulations pertain to nonimmigrant students in F and M status. Students with other types of status, e.g. J, A, E, etc., will need to be included in the system, however, for other reporting and administrative purposes. Systems analysts need to work very closely with the foreign student adviser and others on campus who are concerned with data on foreign students in establishing routines for report generation (see Chapter IV, section C, for a sample listing of departments which might require or have information on foreign students).

Experience suggests that a combination of data elements should be used as the basis for a routine to select foreign student records and differentiate them from records of U.S. students who live overseas or foreign-born students residing in the U.S. Many options exist, but the most effective has been selection based on a combination of the last school attended (type of institution and location), the geographic location from which the student is coming, and immigration status (see "Data Elements with Special Problems for Foreign Students" later in this chapter).

Foreign students also need to be differentiated from foreign scholars. A *foreign scholar* may have a wider range of purposes, such as study, research, teaching, or observation. Scholars generally enter the United States in the exchange visitor status (J), but the nonimmigrant category of temporary worker (H) may also be used for foreign scholars. Capturing data on foreign scholars is difficult because they may not follow the traditional enrollment procedure required of students. The possibility of new legal sanctions against employers hiring aliens who are not eligible for employment means that the institution will need to be able to determine whether a nonimmigrant is authorized for employment. This involves identifying immigration classification and recording dates of employment authorization.

C. Data Elements with Special Problems for Foreign Students

1. Birthdate:

Foreign students frequently omit birthdate or give it and other dates in a format other than requested, such as day/month/year. The birthdate is a critical element because it often serves as a means to distinguish among several foreign students with the same name. Some foreign students, however, will only know the year of their birth, not the month or day.

2. Student Names:

Most countries follow a pattern of naming a person by listing the first (or given) name, then the middle name or initial, followed by the last name (surname or family name). Space for combinations of suffix (Jr., Sr., III) and prefix (Rev., Dr.) designations must be allowed. Some countries, however, use other categories and sequences of names and may vary those combinations at will for different purposes. Some combinations follow ethnic, religious, or national traditions. According to Sepmeyer and Sharp (1981) name categories may include: given or first name, middle name, family or surname (father's or husband's), mother's maiden or family name, father's given name, and grandfather's given name.

Foreign name spelling characteristics and name lengths vary greatly. Hyphens and apostrophes are common in foreign names and should be permitted in name fields (e.g., O'Leary, We-Wan). Name fields should allow for at least 32-50 characters. Some universities have one name field for routine use (32 characters) and another longer name field for the diploma (50 characters).

Identifying a foreign student's surname is often a challenge unless the coder is familiar with the naming customs of specific foreign countries. For example, a Vietnamese student whose name is entered on the application form as "Tran Van Nguyen" could be entered by an unsuspecting coder as "Nguyen, Tran Van", which is incorrect, rather than "Tran, Van Nguyen" (cf. Sepmeyer and Sharp, 1981).

Another source of confusion is the transliteration of student names from languages using other alphabets. For example, the use of "Al" or "El" in Middle Eastern Muslim students' names mostly depends on where the student learned English or who helped with the transliteration from Arabic. Since the prefix frequently assimilates to the rest of the name, an Arabic-speaking family could possibly translate their name to English in many ways (e.g., Elshafei, El-Shafei, Alshafei, Al-Shafei, Asshafei, Esshafei, and Eshafei). Another common Middle Eastern name causing confusion is "Bin" and "Binte."

Likewise, the use of "De" in South American names is sometimes confusing. For example, the Spanish name "Jose Munoz De Silva" shows that Jose is a legitimate child of the family Munoz (father) and Silva (mother). In some cultures this is a very important thing to acknowledge. Although the student may go through school as "Joseph Munoz," it may be important to have the "De Silva" printed on the transcript and diploma.

Students from some countries, such as Indonesia, will have just one name, while some foreign students will take an American name rather than use their own.

Frequent name changes are common in some foreign countries, and the system must both allow for this and permit users to identify students whose names may have changed or may have been listed differently at different times.

3. Foreign Institution Names:

A foreign institution name may vary through translation by different students. This is especially true in Latin America. Many foreign institutions and countries have changed their names. Some transcripts may have the old name and some the new. For example, the University of Riyadh in Saudi Arabia is now known as King Saud University. (For information on coding systems for foreign institutions, see Appendix 3.)

4. **Foreign Addresses:**

The challenge of collecting and maintaining addresses is difficult even for U.S. student records. The foreign student record must also allow for the unique characteristics of foreign addresses, such as:

- Zip codes may or may not be used, or may have differing lengths and combinations of alpha and numeric characters;
- Up to five lines should be allowed to handle address identifiers from foreign countries;
- At least 32 characters should be allowed for each line.

U.S. residents cannot be identified solely on the basis of zip code, as many U.S. students living in foreign countries have U.S. government overseas postal center addresses. These students will list a U.S. zip code which, if used improperly, could cause them to be counted as residing in the U.S.

Using the permanent address field to identify a foreign student will not work, since most foreign students change their mailing and/or permanent address to a U.S. location to avoid mail delays. The system should be able to store the following addresses: emergency contact, permanent, mailing, parent, and local (the local address can be different from the mailing address if P.O. boxes are used).

D. What Data to Collect

Personal Data

Name	Form should request that student use *full legal name* as written on the passport. System should be able to accommodate persons with only one word names, names that are longer than typical American names **(up to 40 characters)**, and name formats which differ from that used in the United States. **Required by INS for F-1 and M-1 students.**
Permanent Address	Address in the home country. Allow sufficient space for foreign addresses, which can be 4 or 5 lines long, including the country. Set up space for the country in address printout programs. Postal code fields should allow for letters as well as numbers. **Foreign addresses require 5 lines with 32 characters each.**
Mailing Address	If different from permanent home address
Local U.S. Address	**Required by INS for F-1 and M-1 students.**
Telephone Number	**Required by INS for F-1 and M-1 students.**
Student Identification Number	The U.S. Social Security number or assigned number.
Sex	Male or female. **Open Doors census information.**

Date of Birth	Specify the order in which the month, day, and year should be listed. Some students will not know the month and day of their birth. **Required by INS for F-1 and M-1 students.**
Birth Place	City and country should be separate data items to allow for sorting by country. **Required by INS for F-1 and M-1 students.**
Religion	Optional. Information on religious preference may be important for planning testing schedules and meals on campus.
Marital Status	Married or single. **Open Doors census information.**
Number of Dependents in U.S.	Other information on spouse and dependent children such as name, date of birth, and immigration classification could be included.
Emergency Contact in U.S.	Name, address, telephone or telex number.
Emergency Contact in Home Country	Name, address, telephone or telex number. Requesting country and city telephone codes, as well as the number, can be helpful for overseas numbers.

Immigration Information

Country of Citizenship	Country whose passport student carries. Be sure country codes used can be easily updated as names of countries change. Use standardized country code systems. **Required by INS for F-1 and M-1 students. Open Doors census information.**
Country of Legal Permanent Residence	This may be different from country of citizenship and country of birth
Passport Number	15 characters, alpha-numeric
Passport Expiration Date	In most cases, except for refugees or permanent resident aliens, permission to remain in the U.S. legally depends on holding a valid passport.
Current Visa Status	Such as A-2, B-2, F-1, J-1, M-1, PR, etc. System should allow for status of refugee, asylee, or parolee for determination of eligibility for financial aid. Allowance should also be made for pending immigration status and visa history. **Required by INS for F-1 and M-1 students. Open Doors census information.**
Place Visa Issued	32 characters.
Date Visa Issued	(Date format.)
Visa Expiration Date	(Date format.)

I-94 Expiration Date	Some Forms I-94 have expiration dates and some indicate duration of status (D/S). Record should allow for either notation.
I-20 ID Admission Number	11 characters. **Required by INS for F-1 and M-1 students.**

Admissions Information

Educational History / Secondary	Undergraduates only. On forms, emphasize importance of listing all schools attended.
Educational History / Post-Secondary	For each college, university or post-secondary institution attended, include dates of attendance, title or degree awarded, and date earned. Allow for listing of degree names as used in home country. Translation into U.S. terms should be discouraged.
Academic Average	Grade, mark, rank in class, examination results. Avoid asking for "GPA" as this is a term unique to the United States. System should allow for quality rating of student other than by U.S. GPA.
Test Scores	Type of test, test date, and test results. In addition to SAT, ACT, GRE, GMAT, LSAT or MCAT, system should allow for recording TOEFL or other English language proficiency test scores.
Major Field of Study	Use standard field codes. **Required by INS for F-1 and M-1 students. Open Doors census information.**
Degree Objective	15 characters. **Required by INS for F-1 and M-1 students.**
Change of Major	Approval date. **Required by INS for F-1 and M-1 students.**
Change of Degree Objective	Approval date. **Required by INS for F-1 and M-1 students.**
Student Status	Freshman, Sophomore, Transfer, Graduate, Special, Language Only, etc. **Open Doors census information.**
Admissions Status	**Required by INS for enrolled F-1 and M-1 students.**
Transfer Credit Granted	

Language Information

Native Language	12 characters.
Basis for Determination of Proficiency in English	TOEFL, ALIGU, Michigan Test, University Proficiency Test, completion of Intensive English Course. Include test sub-scores.

Registration Hold for Language Training

Release from Language Hold — Date, released by whom.

Financial Information

Primary Source of Funds — If more than one source, list percent. This information is important in measuring the impact of international students on academic and local communities and on the national economy. **Open Doors census information.**

In each case, list the name of the person responsible for issuing the funds, the mailing address (billing address), and the approved major. The inclusive date of support as well as the amount of the support should be included. Categories include:

- Personal or Family
- U.S. College or University (funds from your institution)
- Home Government
- U.S. Government
- Private Sponsoring, U.S.
- Private Sponsoring, Foreign
- International Agency

Employment Authorization

- Present Employment
- Inclusive dates of on-campus employment
- Inclusive dates of off-campus employment; who approved by.

Academic Services Information

NOTE: Academic Services Information is used frequently by foreign student advisers' offices for letters of certification to home governments for passport renewal and currency exchange. The information is also necessary for designated school officials to report the status of F-1 and M-1 students to the Immigration and Naturalization Service on the Student Status Form. This is a computer-generated list of F-1 and M-1 students issued periodically by INS to each school to be answered and returned. See Student Status Form reporting codes below.

Years of U.S. Study — Number of months or years of study in the U.S. prior to initial enrollment at this institution.

Enrollment Date — Date first enrolled for classes at this institution. **Required by INS for F-1 and M-1 students.**

Entering Academic Level

Credit Hours Earned — Number of credit hours earned to date.

Course Load — Number of credit hours for which currently enrolled. **Required by INS for F-1 and M-1 students. Open Doors census information.**

Anticipated Graduation Date	**Required by INS for F-1 and M-1 students.**
Date of Graduation/Completion of Study	**Required by INS for F-1 and M-1 students.**
Cumulative Grade Point Average	
Academic Probation	Yes, No.
Academic Adviser	Name, department.
Student Status	Status of each F-1/M-1 student on campus according to specific codes established by the Immigration and Naturalization Service. **Required by INS.** (See Appendix 2 for codes.)

Follow-Up Information

Degrees Earned at this Institution	Include date degree was awarded. This is important to international alumni projects and clubs.
Permanent Forwarding Address	Include country and current employment information for alumni and research purposes.
Permission to Transfer	Date of transfer and name of school to which student transferred.
Practical Training Approval	Date of approval and date of extension.
Termination Date and Reason	Date of and reason for termination. **Required by INS upon specific demand.**

III. DEVELOPING A FOREIGN STUDENT INFORMATION SYSTEM

Considerations for Prospective System Users

As a prospective system user, the first and possibly most important question to ask yourself is, "Do I have a justified need to use a computer at this time?" Many people view computers of any size as panaceas which will deliver them suddenly to efficient automated systems. Does your school have enough foreign students and scholars to make cost-effective use of computers today? Consider this before jumping into an expensive project. Sometimes manual systems are more cost-effective. If, after consulting with your systems people, you find you are ready to automate, proper design of the computer system is essential.

The task of building a computer information system is complex, and most users continually underestimate the difficulties and time involved. It has become clear in surveying the disappointments and success stories of information systems that your active involvement in designing the system is crucial to success. Only by forming an active, effective partnership between your office and the systems department can you ensure the development of a well-designed system.

The actual process of developing or making a major revision to a computer system entails many phases, most often consisting of analysis and definition of needs, system feasibility, designing, building (programming), and implementing the system. The policies and procedures established to support the system are as important as the system itself, perhaps even more so.

If you are developing or upgrading computer systems you will be confronted with a variety of automation options which often depend on the current computing environment, funding support, political climate and staff expertise. Regardless of the circumstances, short term decisions must be made in light of long term directions.

A. Data and Information

Data are collected on all students at colleges and universities. The information system is what makes it possible to draw data elements together into some form which will allow effective use of the data available about the student population. The information system synthesizes the data into useful reports, comparisons, historical documentation and so on, according to the needs of its various users.

According to standard computer industry usage, characters are grouped into fields or data elements and fields are grouped into records. A collection of records is called a file. Files can be grouped to form a data base. If a Data Base Management System (DBMS) is used, the data base becomes a collection of integrated files, i.e., files linked together to share the same body of data and serve as many applications as possible.

Although every part of an information system is important to the success of the whole, effective data collection, including updating, determines success more than any other single phase of the system. All too often, system designers and users focus their attention on designing the processing and dissemination stages of an information system and spend too little time and effort on developing policies and procedures for effective data collection, even though data collection will account for the majority of both time and funds expended once the system is up and running.

B. Determining Information Needs: Who Should Collect Data, How and When?

Information on foreign students is needed by many offices. For example, the admissions office needs to review and process certain data elements in order to make a decision on potential enrollment, the foreign student office needs data to monitor student records and advise students, the controller's office needs to bill students' sponsors efficiently, and so on. In short, different offices need data about foreign students for different reasons. *With such multi-faceted needs, who should collect data, how, and when?* The answer to this question is determined by the answer to a related question: *Who will use the data, how, and when?*

On many campuses, data are collected by separate offices, with no consideration of what data are being collected elsewhere. The result can be isolated blocks of data and needless duplication of effort (Figure 1).

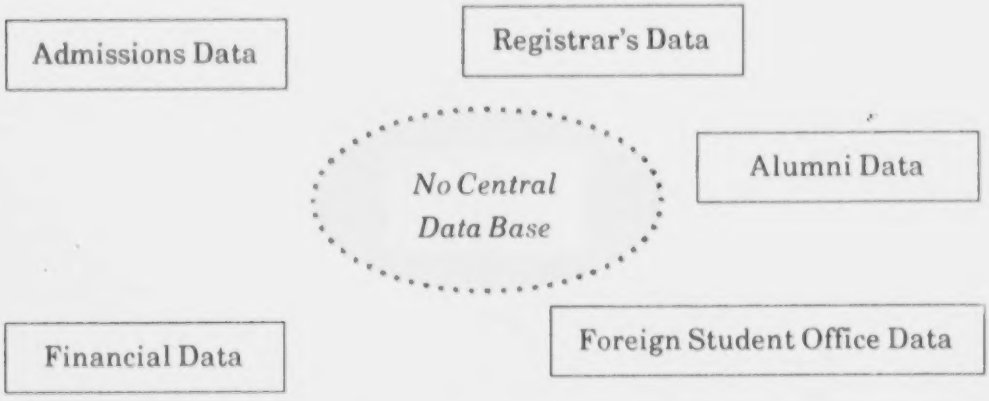

Figure 1

In an integrated system, the blocks may be linked together in a chain (Figure 2).

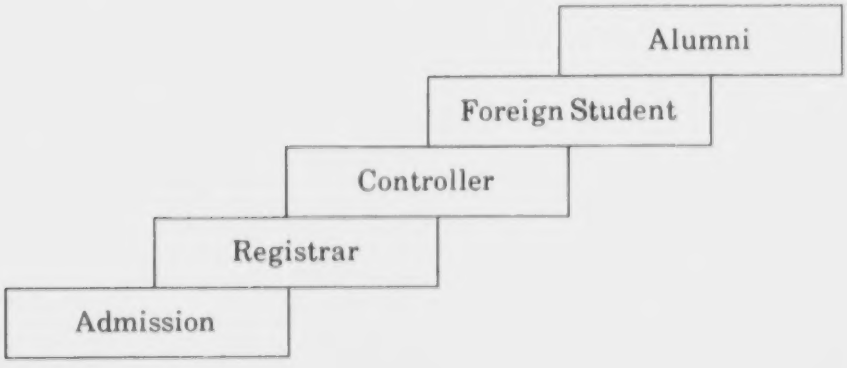

Figure 2

Ideally, the information system creates a smoothly turning wheel of data with each office adding a spoke (Figure 3).

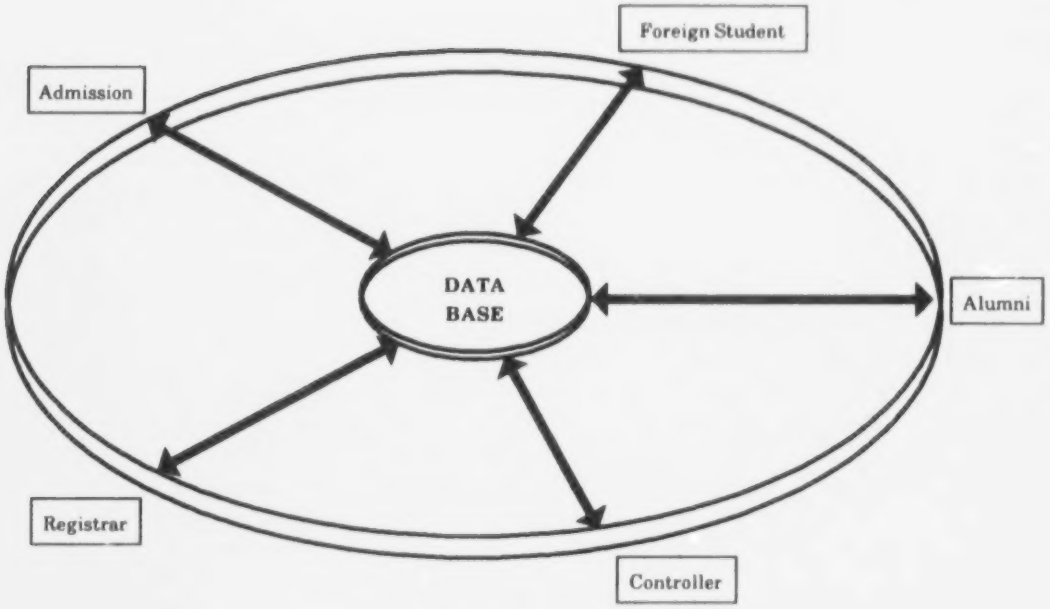

Figure 3

It is important to recognize the centrality of the admissions office in this process. As the office responsible for collecting the entrance information on foreign applicants, the admissions office captures data from admission applications, finanical guarantee forms, transcripts, letters of recommendation, test scores, etc. These data can then be transmitted to other offices, stored in a central database to be shared by all who need elements from it, and expanded upon by various units that work with the student once he/she is enrolled. In this way, data can become an institutional asset, rather than the property or "territory" of a single office.

C. Your Current Situation

Colleges and universities are generally in one of the following four situations with respect to information systems:

1. **Complete Central System Established**

   Foreign student information is currently on a centralized student records system. This is the best situation because information specific to foreign students has been incorporated into the planning stages of the centralized system. You don't have to modify existing programs extensively or justify why a specific data element is necessary.

   There are changes in the information which is required on foreign students and you may need to review the new immigration reporting requirements as well as the data elements sections of this handbook to improve your existing system. You may want to contact some of the resources listed in the appendix for more specific information on what other colleges and universities are doing with foreign student records. Review the section on "a model system" for ideas on enhancements to your current system.

2. **Central System Being Extended**

   You are currently in the process of modifying the centralized student record system to add information (or data elements) specific to foreign students.

   This handbook should help you to justify and define the data elements and information you need to capture on your centralized system. There may be some information included in this handbook that you hadn't considered previously. Use the data collection section to assist you in defining specific fields of information needed. Be careful not to make your system too cumbersome for comfortable use.

3. **Interim System Needed**

   You have submitted or are submitting a justification and request to modify your existing centralized student record system, but your data processing department will not be able to make the changes for 2 - 5 years.

   If you are in this situation, you may be able to move your request up in the data processing department's planning by resubmitting a justification (see "How to Get Priority with the Systems Department," p. 22). This handbook may also assist you in explaining the need for foreign student information to your data processing department.

   If it is not possible to improve the priority of the project, can you live with your current system? If you have a manual system today, will you be able to meet federal and your own reporting and tracking requirements in the next 2 - 5 years?

   You may want to justify computerizing your records, and view it as a short term, stop-gap measure for a certain number of years. If you decide to get your own microcomputer, there may be a way to tie the microcomputer to the central computer and download at least some of the information you need from the centralized student record system. You also may want to think about capturing the information on a microcomputer in such a way that 2 - 5 years from now you can easily upload the information to the central student system files.

   Either of these options requires that you consult with the data processing department for technical advice and information on data elements and how to capture them. For example, if you record a date as "September 15, 1984" and your

data processing department records the date as "091584" you will have a problem when you want to convert your information to the centralized record student system.

4. **Permanent Stand-Alone System**

   You have no centralized student record system at your university or college (or you can not add the needed data elements to the centralized system) and you must develop your own system.

   This is the most difficult situation to be in because you are pretty much on your own in developing a good system. This guide gives you the basic information you need to begin developing a system for keeping foreign student information.

   If you are thinking of choosing a microcomputer and/or software to keep your foreign student records, make sure to contact the data processing department in the beginning stages of planning. Use their expertise and experience with data systems to help you plan. This may seem obvious, but too many foreign student offices have spent a lot of time justifying and selecting a particular microcomputer, only to find out that they cannot buy that particular brand because of purchasing contracts or communications restrictions. The data processing department may be able to suggest equipment and software to meet your needs and help you actually put the system together.

D. Software Options

Software options include: do nothing, build the application from scratch, expand on an existing student records system, purchase a package, or some combination of all four. You can develop (program) your own software or buy software from vendors.

Advantages of Using Vendors	Advantages of In-house Development
1. documentation and training should come with the system	1. local knowledge of the software
2. new systems (if standard) generally up and running much faster if not tied to other systems	2. ability to integrate with other local systems
3. vendor can maintain software and provide upgrades, but cost is a consideration	3. able to take advantage of local software tools and programs
4. cost of standard system development probably less (overhead is spread among many)	4. greater flexibility in responding to unique needs not often addressed by packages

E. Hardware Options

Once the software decision is made, hardware can be selected. Recent innovations, such as electronic links from central computer to word processing equipment have expanded the range of hardware options to consider. It is well worth the time to educate yourself about the electronic networking options available for your campus.

1. <u>Central computer with terminal connection to view, add or change data</u>
   Advantages of this option include:
   - more computing power

- data processing manages the hardware
- possible to integrate system with other offices on campus
- easier access via many terminals
- more capacity to store large volumes of data (hard disks)
- more avenues for data entry tape drives
- no need to download to micros
- easier to justify high cost items such as laser printers
- easier to maintain backup files for the system

2. Stand-alone micro- or minicomputer

   Advantages of this option include:

   - priority of jobs under control of user
   - low initial cost possible
   - more security (privacy) of sensitive data
   - unaffected by central downtime
   - good for driving some peripheral equipment such as scanners
   - easier to make changes in configuration
   - easier to get specialized letter-quality output
   - access to other, versatile capabilities (e.g., spreadsheets)
   - less investment, so better able to keep pace with new PC options

3. Microcomputer connected to a central computer or other micro- or minicomputers to view, add or change data

   The advantage to this approach is that the micro can be used as a terminal or a stand-alone computer as necessary.

4. Files or groups of data transferred from the central computer to a microcomputer for further processing

   Mix of central and micros gives more flexibility and combines advantages, but requires additional knowledge and cost to set up and maintain two systems.
   Possible input media:

   - CRT (online update or transaction file)
   - magnetic tape
   - mark-sense scanner or optical character reader
   - punched cards
   - telephone transmission

   Possible output media:

   - updated disk file
   - print: dot matrix
     letter quality
     laser or graphics quality
     high-speed
   - magnetic tape
   - floppy diskette
   - backup copies of data

5. Some data maintained on a central computer and some on a microcomputer

   For example, basic data on students maintained by admissions or the registrar on the central computer(s) can be processed with data unique to foreign students maintained on a micro.

F. Micro vs. Mainframe

If the decision must be made as to whether to purchase a microcomputer or to develop a centrally shared system, what criteria should be applied? A few questions which should be considered are listed below.

1. Does the central computer already store a large amount of information which will be required data for a foreign student system?
2. Does the data base which houses student records have the flexibility to be altered to accommodate the special data needs of foreign students?
3. Is the number of foreign student records so small as to make entering of all data by international office staff on microcomputer an acceptable alternative?
4. Are you responsible for development of a record system which is unique, e.g., international faculty, so that using a microcomputer makes sense?
5. Assuming that you want a microcomputer to provide your office with a convenient way to manage, store, and retrieve data, are you prepared to enter your data, to write many of your own programs, and back up your own data?

If your decision is to purchase a microcomputer, you should be aware of several considerations:

1. If you want to be able to retrieve data from the central student record system, be sure that the microcomputer you decide to purchase can communicate with the university's central computer. Do not assume that any microcomputer can communicate and retrieve information from your university's central computer. Find out! Inquiry capability and the capacity to "download" or "upload" a data file are crucial considerations.
2. Will your college or university support your choice in terms of software development and maintenance of the microcomputer?
3. What programs are already available for your specialized needs? Does the microcomputer you will choose use data base management systems and word processing systems which appeal to you?
4. Consider the longevity of the manufacturer. It is well known that the computer industry is a highly competitive one and that the competition is making the microcomputer more affordable. But price is not the only consideration and the competition has its drawbacks as well. Not all computer companies now manufacturing microcomputers will be able to remain in the market.
5. Do not blindly believe everything a salesman tells you. Talk to a qualified consultant or trusted person who can give you an unbiased opinion on which micro to purchase or use.

G. Cost Components

Whether you develop your own system on a microcomputer or work with your data processing department to enhance an existing central computer system, there are costs associated with system development. The following is a list of cost components associated with developing and using a system on a microcomputer.

MICROCOMPUTER SYSTEM COST COMPONENTS

HARDWARE	Microcomputer itself (keyboard and monitor) Printer (with possible sound hood, cutsheet feeder, and envelope feeder) Communications hardware (modem, cables, telephone line, communications board or "black box")
SOFTWARE	Packages such as the operating system, database, word processing, spreadsheet, and communications software. Keep in mind that software packages continually improve and you may want to purchase new releases to gain performance options.
SUPPLIES	Media to store and back-up information (floppy diskettes, hard disks, magnetic or cassette tape) Paper and forms for printer, ribbons, diskette holders, and print wheels Journals and publications to keep you informed
PEOPLE	Programmer or developer time to implement and make changes to the system Someone to key in, maintain and back-up the information
MAINTENANCE	Expect your equipment to fail occasionally. As a general rule, allow 10% of the purchase price for yearly maintenance. A maintenance contract is advisable.
TIME	To justify, plan, and purchase the system To develop forms To learn how the computer works (training) To stay current on capabilities

The following is a list of the components associated with developing and using a system that is kept centralized on a mainframe computer.

MAINFRAME SYSTEM COST COMPONENTS

HARDWARE	Terminal and keyboard Printer (if needed)
ONE-TIME COSTS	Installation charge (includes installing the cable and connecting the terminal to the mainframe) Development costs to program the computer to add the information you request
ONGOING COSTS	Usage fee each time you use the transaction (some schools cover this cost centrally) Port charge connecting you to the computer (usually monthly) Software subscription fees Hardware maintenance contracts
TIME	To assist programmer in defining the system To learn how the computer works (training) To stay current on capabilities

H. Forming a Partnership with System Designers

State Your Goals

Have your needs and goals clearly defined and documented. Be prepared to ask the right questions and give the right answers about your information needs. Clearly establish the priority position of foreign student data in the overall institutional data base. Together with the systems people, determine the least expensive available storage technology, given the size of the foreign student population.

Be Persistent

Foreign student advisers and admissions officers should not accept the answer that a legitimate need cannot be met. Such a rejection should be accepted only after it is proven that the plan is inefficient, unreasonably expensive or unneeded.

Think Through the Entire System

Never take a piecemeal approach to systems development. Your system should be designed to meet the needs of the whole project. In the long run, time and money will be saved by this approach.

Consider Current Procedures

People developing the system must understand your needs and problems. You must also be aware of current policies and procedures and be willing to design your system to work with those policies and procedures, rather than attempt to change them to fit the system.

Develop Data Back-up

Design and implement back-up for data which you could not afford to lose. Ensure access to important information when the computer system is unavailable (e.g., copy of record on microfiche) and arrange for off-site copies of data (on magnetic tape) in case of a catastrophe or the need to recreate the computerized data. If your system runs under a database management system (DBMS) the back-up may be already routinely occurring.

Set Deadlines and Meet Them

Be aware of both user-level activity, such as admission date cutoffs, and computer processing schedules, such as the deadline to print finanical aid award letters, and data purge cycles. Create production and performance goals.

I. Data Ownership and Security

The following questions regarding control of data were asked in a recent book (Martin, 1981):

Who is responsible for the accuracy of the data?

Who is permitted to update the data?

Who is permitted to read and use the data (without necessarily being able to change it)?

Who is responsible for determining who can read and update the data?

Who controls the security of the data?

These questions must be answered for every data group or element to ensure that only authorized users can access or change the data. Ideally, only one person or office should be able to change a data element value. Proper system controls must be implemented to ensure data security and privacy. For example, privacy of immigration data is the concern of all international student/faculty offices.

Privacy and security of data are closely related. However, privacy deals more with policy and procedures for controlling release of information, while security deals with safeguards against unwanted access or disclosures. The data collection phase should be carefully designed to reflect the security and privacy policies and procedures of the institution. Data elements, to assist with this task, must be determined and collected at the appropriate time. Security includes grouping data elements into (1) secure, (2) those available for general public, and (3) data for selected persons. The user must work with systems designers to determine access to authority/passwords and to establish or comply with site and file security procedures. Be careful to familiarize yourself with the requirements of the Buckley amendment.

J. Data Verification

Many techniques exist to capture input data such as optical character recognition, mark-sense, terminal entry, and mass data entry from batched data collection forms. Each medium has unique methods for verifying the correctness of the data. However, the computerized process remains limited in its ability to detect all errors. Human verification is required at three points in the data collection process:

1. at the point of data capture, such as when a student turns in an admissions application;
2. at the point of data entry, when source data are being converted to machine readable data; and,
3. at scheduled feedback periods, such as when students register for classes and are given an opportunity to view and verify or correct their recorded data.

On-line systems may provide a verification screen displaying all changed fields, which allows the data entry operator to verify that each data element has passed program edits and is now correctly in the computer file(s). This also provides an opportunity for the operator to verify the spelling of a student name or address. The computer software can verify that a name does not exceed a specified number of characters, but it cannot verify spelling. The computer can be programmed to accept only M or F as a valid sex code, but cannot verify that M or F is the proper value for a person.

Basically, the computer can complete the following validation checks:

Edit	*Example*
Key Verification	Verify the record key is a valid key
Code Verification	F1 is accepted for visa type, T7 is not.
Range Check	Month must be 1-12. Values of 0 or 13 or greater will be rejected.

Missing Data	Names must always be coded when a record is first created.
Data Type	Numeric-only field checks. Major abbreviations are alpha only.
Reasonableness of Data	An undergraduate student cannot enroll in certain graduate courses.

K. Building a Data Element Dictionary

A single data element may be used by many different offices and originate from a variety of source documents. Each data element used must be given a name, and its characteristics defined. Some data elements will represent a combination of several discrete components. For example, a U.S. address is composed of a house number, street name, city, state, and zip code. Together these isolated parts form a single useful data element.

The best method to specify and standardize data elements used on campus is to build a Data Element Dictionary. National organizations such as the National Association for Foreign Student Affairs (NAFSA), the College Board, Western Interstate Commission for Higher Education (WICHE), Higher Education General Information Survey (HEGIS), and others are attempting to standardize data definitions at the national level, and may be able to assist schools seeking standardized codes for particular data elements.

As an institution compiles a Data Element Dictionary, all external data requirements as well as internal information needs must be considered. In doing so, the following characteristics of each data element must be defined and standardized. The following fields are recommended for inclusion in each Data Element Dictionary entry:

1. Data Element Number (a dictionary number assigned for indexing and cross-reference)
2. Primary Name or Title of Data Element
3. Abbreviated Name or Title
4. Alias (other names which can be used to get the same data element)
5. Data Description (must be specific, e.g., date of admission: is this the date application was received, date admission offered, or date admission fee paid?)
6. Size (number and types of characters allowed, e.g., 32 alpha/numeric character limit)
7. Format (e.g., birthdate - mm/dd/yy)
8. Edit Criteria (see Data Edit Verification, Chapter III, Section J)
9. Source of Data (e.g., admissions application)
10. Uses (list offices where the data element is used)
11. Security Consideratons (see Data Security, Chapter III, Section I)
12. Comments (free-form field for any further clarification).

L. Phases of Data

Data are collected and stored for a multitude of purposes. Some are used for only one purpose, i.e., for an admissions decision, and some have recurring uses that require continued maintenance, such as addresses. Some data have immediate value as information, and some data are collected for later use. Not all data need to be collected at one point, such as admissions. Some information is necessary only upon enrollment and can be collected during registration. Capture information when and where the best chance of correct and timely collection exists.

Eventually, selected data elements or entire data records will be purged or destroyed from computer master files and transferred to historical storage. Document specific policies and procedures to ensure the control of data as it passes from one system to another (i.e. admission to registration to graduation to alumni records) and as it moves to historical storage. Historical data storage provides an audit trail of past activity and an increasingly useful tool to allow for statistical analysis and projections.

Determine procedures for use of data by multiple systems, efficient retention of historical records, and limits on retention of historical data. Keep adequate records of when and how data elements were first collected, discontinued, and when basic characteristics may have changed. It is extremely frustrating to cycle through years of historical records and continually find changes in file formats and data values.

You will need to accommodate and document changes in:

- data definitions (e.g., new academic deficiency rules)
- data values (e.g., new name of a country, a new major field, new ethnic origin category)
- storage requirements with increase/decrease in volume of data collected
- number of data elements (e.g., new data element collected as a result of new government requirement)
- length of data element (e.g., zip code changing from 5 to 9 characters)
- computer technology (e.g., ability to transfer data base data to a microcomputer).

IV. COMPUTERIZING THE FOREIGN STUDENT OFFICE

A. Information Needs of the Foreign Student Office

Much attention has been paid to developing systems which get students into school (admission), into classes (registration and accounts payable), and out of school (graduation), but less attention is paid to developing systems to assist with the ongoing daily needs of foreign students. The foreign student office needs to monitor or record the following items:

- immigration information/I-20's issued
- academic progress, including academic probation reports and fulltime student status
- honors and activities
- health problems
- academic advising
- progress towards graduation
- leave of absence
- continuing registration for Ph.D. and research scholars
- financial sponsor information
- host family information
- office contacts with each student
- practical training requests
- career choice

B. How to Get Priority with the Systems Department

Keeping accurate, timely information on foreign students and prospective foreign students may help in maintaining and increasing the foreign student population. Address these factors, as well as legal reporting requirements, when documenting the need for automating foreign student records.

1. Demonstrate the impact of <u>not</u> automating foreign student records and thus prove that the project is essential to your institution. Data processing departments are often involved with mandated projects, and your project may not get priority until you show that capturing foreign student information is legally necessary and/or essential to the fiscal health of the institution.

2. Be confident and assertive with your project plan. If you know what you need and you have a good plan, you are in a good position to get systems development assistance.

3. Provide your systems staff wth a clear and complete description of your needs. Check to see if they have a standard form for such requests. If not, refer to the sample format given in Appendix 4.

4. Contact your grant /contract office for possible funding sources. Get systems development help from talented students within your institution. In justifying your needs, carefully identify data that are mandated by law, or necessary for the generation of external and internal reports essential for monitoring and advising individual foreign students and scholars. Stress the need for timely access to data to meet INS reporting procedures, for making decisions regarding the admission and advising of students, and for providing data for preparation of grant proposals.

C. Getting Together with Other Departments

Other departments at your college or university have valuable information that you may be able to use. They, in turn, may need information you have.

Contact Area	*Data Collected or Needed*
Academic Deficiency	Student status
Admissions	Educational history, field of study, status
Advising	Status, academic changes
Alumni	Contact/tracking after leaving school
Athletics	Roster of athletes
Bursar or Controller	Registration status, sponsorship information
Financial Aid	Eligibility for loans, scholarships
Fundraising or Development	Graduate and sponsorship information
Graduate School	Same as "Admissions"
Health Center	Health and insurance-related information
Housing	Housing available, marital status
Institutional Studies/Research	Statistics on foreign students, roster
International Programs	Immigration-related data, host-family information
Personnel	Employment authorization
Placement	Practical training, post graduate employment
Registrar	Demographics, major field, student records, academic status
Security & Traffic	Arrest records
Special Interest Clubs	Nationalities, hobbies, speaking opportunities
Student Accounts	Sponsorship information
Student Employment	On-campus employment

D. Developing Forms that Work

- Design the form to request information in the same order as it is input into the computer. Better yet, design the form in a logical order and develop the computer input to match. Separate similar data elements on the form so that information is not captured or filled out incorrectly.
- Make sure the language you are using on the form is clear and easy to understand for a foreign student. Avoid using terms unique to the United States such as GPA, FAF, major, IRS 1040, SAT, Social Security Number, credit hour, quarter, semester, fall, spring, summer, winter, Thanksgiving break, spring break, "rolling" admission, and cutoff date. Since these terms are unfamiliar to most foreign students, the items are likely to be left blank or the required documents omitted. Rather than using U.S. terminology like "fall semester" use the starting month of the term.
- If the form is to be filled in by hand, allow plenty of room to write. Double-space the form and figure five hand-written characters per inch.
- If the form is to be filled in with a typewriter or word processor, be sure that the form is typewriter-spaced so the typist won't need to make continual platen adjustments . Line up the fill-in information on specific tab settings across the form. Don't use check boxes because typed "x's" may fall between boxes and are difficult to line up. Instead, label the choices "a, b, c" and have one area to fill in the appropriate letter.
- Consider orienting special forms to the type of foreign applicants (undergraduates and graduates) and geographical area (Europe, Far East, Middle East, Africa). Instructions should be specific and consistent. Terms like "optional" and "recommended" should not be used. Overseas students are not familiar with forms as we know them in the U.S. Allow sufficient space for comments and foreign educational terms, such as A-level, O-level, Maitrise, License, Candidate, or Form (I, II, III, IV, V).
- Consider polling foreign students on your campus before issuing new application forms, brochures, and other documents. Be sure that you have a sample of various geographic areas when polling the students.

E. Using Data: Hints for Reporting and Research

Be clear in giving instructions to the systems department about what kinds of report you will need and why you need them. A sample report request is included in Appendix 5, and may serve as a model for you.

Once your reporting routines are established, you should:

- establish a regular distribution list which includes top level administrators.
- try to report annually statistics about the student population with foreign students specifically identified.
- always include a cover letter which summarizes the changes year to year, or a five year overview. Busy administrators will not read a whole report.
- translate the figures into dollars. Nothing gets senior administrators' attention faster than money.
- ask for feedback and make it easy to respond (tear off sheets, check lists, etc.).

- instead of producing the same report every semester, do one statistics report annually in the fall term and spotlight unique things in the spring, i.e. country or continent profiles. People get bored by things that are repetitious. Don't bore your audience by being redundant. However, comparisons of data are also important information.
- summarize your statistical report and send a short summary to more people. Statistical reports are expensive to reproduce and usually are not thoroughly read.
- do analyses every 5 and every 10 years showing population shifts.
- instead of a statistical report, send out an activity report such as programs sponsored by the International Student Organization or campus guests from other countries or a summary of research being done by foreign graduate students or languages spoken by foreign faculty. Call attention to the uniqueness of the international students and scholars.
- analyze the economic impact of your student body and share it with the Chamber of Commerce.
- pull highlights of interesting statistics from your report and send them for publication to newsletters for the faculty, alumni, students, union employees, and the local community.
- concentrate on helping the campus community notice students from underrepresented areas of the world. Ask the newspaper to profile the one student from Madagascar rather than always reporting the large number of students from Taiwan or Hong Kong.
- learn how to describe your office, staff and services in terms of time and money spent on types of activities such as counseling, social activities, immigration support services and so on. Senior administrators must have this information to assimilate it along with everything else they read. A summary report on numbers of students served, forms prepared, activities held, number of hours spent in conference, etc. and an analysis of staff and program money allotted to the activities may have more impact than a bi-annual census report on where students are from.

Remember, if you do not have 100% of the data needed, report the 90% you have. It is better than no report at all. Waiting for the perfect list which will rarely come will detract from your administrative reputation.

The development of a data base system for foreign students will enhance your capacity to do research. Possible areas of inquiry could include how the academic performance of foreign students at your institution relates to the admission standards you employ in admitting them, how predictive TOEFL scores are in assessing English language proficiency or how important SAT or GRE scores are in predicting academic success.

Each year AACRAO awards a $1,000 grant for research dealing with foreign students. It is the hope of the authors of this publication that by encouraging the development of a data base system for foreign students, interest in research in the area will be increased. Since the best research topics usually come from professionals working in the field, you are encouraged to submit proposals for research on foreign students to the AACRAO Committee on Research for Foreign Students.

V. CHARACTERISTICS OF A MODEL FOREIGN STUDENT INFORMATION SYSTEM

The most important consideration in the development of a computer system is that it serve the needs of the user. Too often systems are designed which simply transfer manual functions to computer operations without improving or taking advantage of the benefits which can be obtained. This section is intended to provide an outline of functions, special needs and characteristics which should be designed into an integrated foreign student computer information system.

A. Functions

The information system should serve the following functions:

1. Recruitment
2. Admissions
3. Evaluation of transfer credit
4. Advising
5. Enrollment monitoring
6. Management information
7. Immigration reports
8. Graduation
9. Practical training
10. Placement in undergraduate or graduate school
11. Alumni information.

B. Special Needs

The student information system should accommodate the special needs unique to foreign students:

1. Longer fields for name and address
2. Additional fields for passport numbers, passport expiration date, type of visa, place visa issued, date visa issued, date visa expires, present immigration classification, I-20 identification number, date I-20 issued, English language score, financial information, etc.
3. Method of accurately matching the different credentials received for applicants
4. Flexibility for foreign student academic credentials, acceptance of credit, and grading
5. Ability to provide special reports about foreign students
6. A memorandum area for special comments
7. Ability to place "holds" on a student's record to require a contact before registration
8. Tracking and information on visiting foreign scholars
9. Academic progress monitoring
10. Interface with a letter generator and special forms printing
11. Admission without a social security number.

C. System Capabilities

A model foreign student information system will have the following characteristics:

1. Use of alpha names or abbreviations rather than numeric codes as much as possible, both in the computer and on printed reports.
2. Interface with other available data to eliminate hand-loading and duplication of data computer files.
3. Automatic "triggers" to send notices and/ or complete files such as monitoring I-94 or I-20 ID renewal dates.
4. Terminal screens designed for specific needs rather than screens which have been designed for other offices (unless the use is largely the same).
5. A report generator to provide special reports and inquiries easily and in a short time (without needing a computer programmer).
6. Guaranteed privacy and security of data.
7. Automatic tie to computer entry of test score tapes such as ACT, SAT, and TOEFL.
8. Ability to integrate the data with the entire life cycle process of the student data flow beginning with admission inquiry, through enrollment, graduation and to alumni records.

APPENDIX 1

Federal Regulations Pertaining to Collection of Data and Reporting to INS on Foreign Students 8 CFR 214.3

The following is reprinted verbatim from the regulations:

(g) Record-keeping and reporting requirements

(1) Record keeping requirements

An approved school must keep records containing certain specific information and documents relating to each F-1 or M-1 student to whom it has issued a Form I-20A or I-20M while the student is attending the school and until the school notifies the Service, in accordance with the requirements of paragraph (g)(2) of this section, that the student is not pursuing a full course of study. The school must keep a record of having complied with the reporting requirements for at least one year. If a student who is out of status is restored to status, the school the student is attending is responsible for maintaining these records following receipt of notification from the Service that the student has been restored to status. The designated school official must make the information and documents required by this paragraph available to and furnish them to any Service officer upon request.

The information and documents which the school must keep on each student are as follows:

(i) The admission number from the student's Form I-20 ID copy.

(ii) Country of Citizenship.

(iii) Address and telephone number.

(iv) Status, i.e., full-time or part-time.

(v) Course load.

(vi) Date of commencement of study.

(vii) Degree program and field of study.

(viii) Expected date of completion.

(ix) Nonimmigrant classification.

(x) Termination date and reason, if known.

(xi) The documents referred to in paragraph (k) of this section.

(xii) Information specified by the Service as necessary to identify the student, such as date and place of birth, and to determine the student's immigration status.

(2) Reporting requirements

At intervals specified by the Service but not more frequently than once a term or session, the Service's processing center shall send each school (to the address given on Form I-17) as that to which the list should be sent a list of all F-1 and M-1 students who, according to Service records, are attending that school. A designated school official at the school must note on the list whether or not each student on the list is pursuing a full course of study and give, in addition to the above information, the names and current addresses of all F-1 or M-1 students, or both, not listed, attending

the school and other information specified by the Service as necessary to identify the students and to determine their immigration status. The designated school official must comply with the request, sign the list, state his or her title, and return the list to the Service's processing center within sixty days of the date of the request.

(h) Review of school approvals

(1) Regular review of school approvals

The district director shall review from time to time the approval granted to each school in his or her district. The purpose of the review is to determine whether the school meets the eligibility requirements of paragraph (e) of this section and has complied with the reporting requirements of paragraph (g)(2) of this section. The district director may require each school whose approval is reviewed to furnish a currently executed Form I-17 as a petition for continuation of school approval without fee together with the supporting documents specified in paragraph (b) of this section. If, upon completion of the review, the district director finds that the approval should not be continued, the district director shall institute withdrawal proceedings in accordance with §214.4(b).

(k) Issuance of Certificate of Eligibility

A designated official of a school that has been approved for attendance by nonimmigrant students must certify Form I-20A or I-20 M, but only after page 1 has been completed in full. A Form I-20A-B or I-20M-N issued by an approved school system must state which school within the system the student will attend. The form must be issued in the United States. Only a designated official shall issue a Certificate of Eligibility, Form I-20A-B or I-20M-N, to a prospective student and only after the following conditions are met:

(1) The prospective student has made a written application to the school.

(2) The written application, the student's transcripts or other records of courses taken, proof of financial responsibility for the student, and other supporting documents have been received, reviewed, and evaluated at the school's location in the United States.

(3) The appropriate school authority has determined that the prospective student's qualifications met all standards for admission.

(4) The official responsible for admission at the school has accepted the propsective student for enrollment in a full course of study.

APPENDIX 2

Format for Reporting to U.S. Immigration and Naturalization Service

U.S. DEPARTMENT OF JUSTICE
IMMIGRATION AND NATURALIZATION SERVICE

STUDENT STATUS FORM
SCHOOL INSTRUCTIONS

APPROVED OMB 1115-0119
EXPIRES 9/30/87

URGENT MATERIAL, IMMEDIATE ATTENTION REQUIRED, PLEASE RETURN BY 04/21/85

SCHOOLS WHICH ARE APPROVED TO ENROLL F-1 AND/OR M-1 NONIMMIGRANT STUDENTS MUST PERIODICALLY REPORT THE STATUS OF THESE STUDENTS. UNDER TITLE 8, SECTION 214.3(G)(2), CODE OF FEDERAL REGULATIONS, FAILURE TO COMPLY MAY RESULT IN THE WITHDRAWAL OF PERMISSION TO ENROLL F-1 AND/OR M-1 NONIMMIGRANT STUDENTS.

FOR EACH STUDENT LISTED ON FORM I-721, INDICATE HIS/HER CURRENT STATUS BY FOLLOWING THE INSTRUCTIONS. IF YOU NEED TO CANCEL ANY INFORMATION ABOUT THE STUDENT, YOU MAY USE THE ATTACHED FORM I-721 SUPPLEMENT FOR THAT PURPOSE.

BUT BE SURE TO REPORT THE STUDENT'S STATUS ON FORM I-721.
IF ANY F-1 OR M-1 STUDENTS ENROLLED IN YOUR SCHOOL ARE NOT LISTED ON FORM I-721, EACH MUST BE LISTED ON FORM I-721 SUPPLEMENT. FORM I-721 AND EACH SUPPLEMENT MUST BE SIGNED AND DATED BY A DESIGNATED SCHOOL OFFICIAL. (SEE LISTING BELOW.)

SCHOOL CEEB- ALE.14E ...)

SCHOOL NAME-

ADDRESS-

DATE GENERATED: 3/21/85

ONLY THE PERSONS LISTED BELOW SHOULD BE DESIGNATED SCHOOL OFFICIALS. NO OTHER PERSON MAY SIGN.

1.
2.
3.
4.
5.

TO ADD, DELETE, OR REPLACE A DESIGNATED SCHOOL OFFICIAL, SUBMIT A FORM I-17A TO THE INS OFFICE HAVING JURISDICTION OVER YOUR SCHOOL. NO/SEE WILL THEN BE AUTHORIZED TO SIGN THIS FORM.

DEFINITIONS OF REPORT HEADINGS:

PA/IR: AN "X" UNDER THIS HEADING MEANS THE STUDENT HAD PERMISSION TO ENGAGE IN PRACTICAL TRAINING ON THE DATE THIS FORM WAS GENERATED.

L/S: THE DEFINITIONS OF THESE LEVEL OF EDUCATION OR COURSE OF STUDY CODES ARE CONTAINED ON FORMS I-20A-B AND I-20M-N.

FORM I-721 (11/01/84)

ALL PORTIONS OF THIS FORM MUST BE COMPLETED AND MAILED BY 04/21/85.

RETURN TO: ACS/STUDENT SCHOOLS SECTION
P.O. BOX 170
LONDON, KENTUCKY 40741

STUDENT STATUS CODES - DEFINITIONS

1-STUDENT IS ENROLLED AND PURSUING A FULL COURSE OF STUDY, OR ONE OF THE FOLLOWING:
- ON AUTHORIZED VACATION
- ENGAGED IN POST-DOCTORAL STUDY OR RESEARCH
- ENGAGED IN "COOPERATIVE STUDY" (ALTERNATE WORK/STUDY PROGRAM) AT A COLLEGE, UNIVERSITY, CONSERVATORY, OR SEMINARY
- TEMPORARILY NOT ENROLLED OR PURSUING LESS THAN A FULL COURSE OF STUDY DUE TO ILLNESS.

2-STUDENT IS ENROLLED BUT NOT PURSUING A FULL COURSE OF STUDY.

3-STUDENT IS NO LONGER ENROLLED AT THIS INSTITUTION, INCLUDING THE FOLLOWING:
- GRADUATED/COMPLETED COURSE OF STUDY
- TRANSFERRED
- WITHDREW/TERMINATED
- PARTICIPATING IN APPROVED POST-GRADUATE PRACTICAL TRAINING.

4-STUDENT WAS ADMITTED TO THE SCHOOL AND ISSUED FORM I-20A-B OR I-20M-N, BUT HAS, TO DATE, NOT ENROLLED IN THIS SCHOOL.

5-STUDENT HAS CHANGED FROM F-1 OR M-1 STATUS TO ANOTHER NON-IMMIGRANT STATUS, HAS ADJUSTED TO IMMIGRANT STATUS, OR HAS OTHER INS PERMISSION TO STAY IN THE UNITED STATES (OTHER THAN F-1 OR M-1 CLASSIFICATION).

6-STUDENT HAS NOT BEEN ISSUED A FORM I-20A-B OR I-20M-N BY THIS SCHOOL.

U.S. DEPARTMENT OF JUSTICE
IMMIGRATION AND NATURALIZATION SERVICE

STUDENT STATUS FORM
STUDENT LISTING

APPROVED OMB 1115-0119
EXPIRES 9/30/87

1. CIRCLE ONLY ONE APPROPRIATE NUMBER (1 THRU 6) FOR EACH STUDENT TO INDICATE HIS/HER CURRENT STATUS. SEE CITE DEFINITIONS ON THE INSTRUCTION PAGE.

2. DO NOT SEPARATE THE INDIVIDUAL PAGES OF THIS LISTING. RETURN ALL PAGES TO THE ADDRESS ON THE INSTRUCTION PAGE.

3. BE SURE THE LAST PAGE OF THIS LISTING, AND ANY SUPPLEMENTS, ARE SIGNED AND DATED BY A DESIGNATED SCHOOL OFFICIAL.

SCHOOL CODE: ALE215I
SCHOOL NAME:

*** F-1 STUDENTS ***

INS ADMISSION NUMBER	CURRENT STATUS (SEE INSTRUCTION 1)	LAST (FAMILY) NAME	FIRST (GIVEN) NAME	DATE OF BIRTH MM/DD/YY	COUNTRY OF CITIZENSHIP	L S	PR TR
	1 2 3 4 5 6				NIGEI	J	
	1 2 3 4 5 6				KUWAI	J	
	1 2 3 4 5 6				SPAIN	J	
	1 2 3 4 5 6				ICELA	D	
	1 2 3 4 5 6				SPAIN	C	
	1 2 3 4 5 6				IRAN	J	
	1 2 3 4 5 6				PHILI	C	
	1 2 3 4 5 6				CYPRU	C	
	1 2 3 4 5 6				NIGEI	C	
	1 2 3 4 5 6				MALAY	C	
	1 2 3 4 5 6				IAIWA	J	

TOTAL F-1 STUDENTS 11
TOTAL M-1 STUDENTS 0

SIGNATURE OF DESIGNATED SCHOOL OFFICIAL PRINT/TYPE FIRST NAME, LAST NAME DATE SIGNED

U.S. DEPARTMENT OF JUSTICE
IMMIGRATION AND NATURALIZATION SERVICE

STUDENT STATUS FORM
SUPPLEMENT - CORRECTIONS/ADDITIONS

APPROVED OMB 1115-0119
EXPIRES 9/30/97

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1. NOTE: IF YOU HAVE MORE THAN 40 ADDITIONS OR CORRECTIONS, MAKE ADDITIONAL COPIES OF THIS FORM PRIOR TO FILLING IT OUT.
2. UNDER "TYPE OF ACTION" CIRCLE ONE LETTER TO INDICATE WHETHER THAT ACTION IS AN ADDITION(A) OR A CORRECTION(C).
3. UNDER "CURRENT STATUS" CIRCLE THE APPROPRIATE STATUS FOR EACH STUDENT ADDED.
4. COMPLETE ALL OTHER COLUMNS WITH ANY KNOWN INFORMATION EXACTLY AS IT APPEARS IN YOUR RECORDS.
5. WRITE THE PAGE NUMBER IN EACH FORM I-721 SUPPLEMENT AND ON ANY ADDITIONAL SUPPLEMENTS ATTACHED IN THE SPACES PROVIDED.
6. BE SURE ALL SUPPLEMENTS ARE SIGNED AND DATED BY A DESIGNATED OFFICIAL.

*** PLEASE PRINT OR TYPE ALL INFORMATION. ***

SCHOOL CODE: [illegible]
SCHOOL NAME: [illegible]

SUPPLEMENT PAGE ____ OF ____ PAGES

TYPE OF ACTION	SEVIS ADMISSION NUMBER	CURRENT STATUS	LAST (FAMILY) NAME	FIRST (GIVEN) NAME	DATE OF BIRTH MM/DD/YY	COUNTRY OF CITIZENSHIP	L S
A C	----------	1 2	----------	----------	--------	----------	-
A C	----------	1 2	----------	----------	--------	----------	-
A C	----------	1 2	----------	----------	--------	----------	-
A C	----------	1 2	----------	----------	--------	----------	-
A C	----------	1 2	----------	----------	--------	----------	-
A C	----------	1 2	----------	----------	--------	----------	-
A C	----------	1 2	----------	----------	--------	----------	-
A C	----------	1 2	----------	----------	--------	----------	-
A C	----------	1 2	----------	----------	--------	----------	-
A C	----------	1 2	----------	----------	--------	----------	-
A C	----------	1 2	----------	----------	--------	----------	-
A C	----------	1 2	----------	----------	--------	----------	-
A C	----------	1 2	----------	----------	--------	----------	-
A C	----------	1 2	----------	----------	--------	----------	-
A C	----------	1 2	----------	----------	--------	----------	-
A C	----------	1 2	----------	----------	--------	----------	-
A C	----------	1 2	----------	----------	--------	----------	-

SIGNATURE OF DESIGNATED SCHOOL OFFICIAL ---------- PRINT/TYPE FIRST NAME, LAST NAME ---------- DATE SIGNED ----------

42

43

APPENDIX 3

Guide to Standardized Coding Systems

This guide lists some of the coding systems already in use for different purposes. You will need to choose a suitable set of codes for general use in your system, and set up translation tables to convert the codes for others' use.

Wherever possible, it is preferable to adopt a standardized set of codes rather than inventing your own. As the tables below demonstrate, there is very little standardization at the present time!

Besides the codes described below, you may want to set up special coding systems for:

- foreign institutions
- students' sponsors or primary sources of support
- special handling
- registration holds
- immigration status
- other items.

ICDC hopes that a standard set of codes for foreign institutions can be devised and published in the near future. Readers of this publication are invited to contact ICDC with suggestions or information on existing systems.

Table 3. A: INS Student Status Codes

Note: Use of these codes is mandated by the Immigration and Naturalization Service. Code #2 is designed as a "red flag" for the Service, and its use should result in investigation of the student's current status. Codes #3, 4, and 5 will cause the INS to check further in its database and investigate if an explanation is not found.

1. Student is enrolled and pursuing a full course of study, or one of the following:
   - on authorized vacation
   - engaged in post-doctoral study or research
   - engaged in "cooperative study" (alternate work/study program) at a college, university, conservatory, or seminary
   - temporarily not enrolled or pursuing less than a full course of study due to illness.
2. Student is enrolled, but not pursuing a full course of study.
3. Student is no longer enrolled at this institution, including the following:
   - graduated/completed course of study
   - transferred
   - withdrew/terminated
   - participating in approved post-graduate practical training.
4. Student was admitted to the school and issued form I-20A-B or I-20M-N, but has, to date, not enrolled in this school.
5. Student has changed from F-1 or M-1 status to another nonimmigrant status, has adjusted to immigrant status, or has other INS permission to stay in the United States (other than F-1 or M-1 classification).
6. Student has not been issued a form I-20A-B or I-20M-N by this school.

Table 3. B: Country/Nationality Codes

SOURCE	DESCRIPTION	USE(S)	COMMENTS	SAMPLE COUNTRIES	
				Afghanistan	Zimbabwe
IIE 809 UN Plaza New York, NY 10017	4 digit	Open Doors annual census, Profiles	* 200 total designations * 1st 2 digits represent continent and region * published in Open Doors and Profiles	2205	1160
INS STSC System 425 Eye St., N.W. Washington, DC 20536	5 alpha character	mandated reporting, at least annually	* 207 total designations, incl. "stateless," "born on ship" * requires more file space than other systems	AFGHA	ZIMBA
U.S. Information Agency Room 714 301-4th St., S.W. Washington, DC 20547	2 alpha character	mandated for J Exchange Visitor Program holders	* 223 total designations * most recent edition is 1975	AF	RH
TOEFL, Educational Testing Service Princeton, NJ 08541	3 digit	TOEFL and other test score matching by tape	* 191 total designations, plus "other" * published in test bulletins	301	188
INS nationality codes, FY 84	2 character (alphanumeric)	Form I-721	* 180 designations for 210 possible nationalities including "stateless" (YY), "unknown" (99)	40	H7

Table 3. C: Fields of Study

SOURCE	DESCRIPTION	USE(S)	COMMENTS	SAMPLE FIELDS	
				Archaeology	Zoology
Institute of International Education/NCES	7 character (6 digit, plus - in position 3)	Open Doors, census, steps 2 and 3, and Profiles	* based on National Center for Educational Statistics coding system * specified over 1000 fields * published in Open Doors and Profiles * gives detail in fields typically entered by foreign students	45 0301	26 0701
U.S. Information Agency	4 digit	mandated for reporting by J Exchange Visitor Program holders	* specifies 702 fields * current system last updated in 1975, new system may be in production for revised skills list	1220	2440
TOEFL, Educational Testing Service	3 digit	ISIS requests (Int'l Student Identification Service)	* specifies 113 fields, plus "other" (199) * published in TOEFL test booklets	111	352
Higher Ed General Information System (HEGIS)	4 digit		* specifies 394 fields * lacks detail in technical/engineering fields typically entered by foreign students	2203	0407

APPENDIX 4

Sample Request for Assistance from the Systems Department

To receive priority and assistance from the systems group it is essential that you provide an understandable and complete list of your needs. Many institutions have a standard method for requesting computerized assistance. Check with your systems department. Following is a sample form:

General Project Approval Request

Descriptive Title _____

Department _____

Authorizing Signature _____ Date _____

Individual Who Prepared Request _____

The following information should be provided as a preliminary step in this project request.

1. Brief statement of purpose: (What will the new/revised system accomplish?)

   _____

   _____

2. What is the impact of this request? Does the system primarily benefit your department or a limited set of users (local) or the entire University (global)? If local, indicate the users who gain the primary advantages. _____

   _____

3. Please indicate whether the overriding purpose is to improve the decision making process or the processing of transactions. _____

   _____

4. Is the primary advantage to reduce costs or improve services? _____

5. Indicate whether the proposal is concerned with students, faculty, staff or adminsitration. _____

6. What offices will have new burdens (or benefits) as the result of your project? Provide the following information:

   A. Data input to your system

      (1) Source Office (e.g., Personnel) _____

      (2) Type of Data (e.g., staff addresses) _____

      (3) Volume (e.g., 15,000 people) _____

      (4) Frequency (e.g., yearly) _____

      (5) Will it be machine readable? _____

      (6) Does the file now exist? _____

   B. Data output from your system going to other offices.

      (1) Destination _____

      (2) Type of Data _____

      (3) Volume _____

      (4) Frequency _____

      (5) Will it be machine readable? _____

      (6) Does the file now exist? _____

7. Will your department be contributing funds to this effort? If yes, how much? _____

8. When must the proposed system be implemented? _____

9. Is this proposal mandatory? _____

10. Will you devote a significant amount of your own time toward the implementation of this project? _____

APPENDIX 5

Sample Report Request

Objective: To identify all incoming undergraduate students (U.S. citizens, permanent residents, and nonimmigrants) who need English language assessment. This information is required by the staff of the Writing Workshop and the English as a Second Language Program in the Department of Modern Languages and Linguistics.

Report #1

Info. Statement: Alphabetical list of all incoming students, organized by college, with the following information:

- Name
- Permanent number
- Social Security Number
- Citizenship
- Immigration Classification (permanent residents and nonimmigrants)
- SAT Verbal Scores (most recent and second most recent)
- SAT - Test of Standard Written English (TSWE) Score (most recent and second most recent)
- ACT - English Score
- TOEFL Score
- Name and address of all secondary schools attended
- Produce first week of June and again in mid-August with all additions and deletions noted.

Report #2

Info. Statement: Alphabetical list of only non-U.S. Citizens (permanent residents and non-immigrants) organized by college with the following information:

- Same as Report #1
- Delivery the same as Report #1.
- Two copies.

APPENDIX 6

Bibliography

Adviser's Manual of Federal Regulations Affecting Foreign Students and Scholars, National Association for Foreign Student Affairs, 1982.

Emendations (to above), National Association for Foreign Student Affairs, 1983.

Codes for Educational and Cultural Exchange, United States Information Agency, June 1975.

EDUCOM, Campus Computing Strategies. Digital Press, Bedford, Massachusetts (1982). This monograph describes the planning for information processing technology at ten colleges and universities of various kinds and sizes. A summary of the contents of this book appears in the EDUCOM Bulletin "Strategies for Campus Computing," pp. 20-21, Summer 1982.

Faculty Member's Guide to U.S. Immigration Law, National Association for Foreign Student Affairs, May 1981.

Family Educational Rights and Privacy Act of 1974, which includes the Buckley amendment regulations implementing the law 34CFR99.

Foreign Educational Credentials Required For Consideration of Admissions to Universities and Colleges in the United States, prepared by the American Association of Collegiate Registrars and Admissions Officers for the Agency for International Development, Office of International Training, April 1981.

A Guide to Postsecondary Institutions for Implementation of the Family Educational Rights and Privacy Act of 1974 as Amended, prepared by the American Association of Collegiate Registrars and Admissions Officers Task Force on The Family Educational Rights and Privacy Act of 1974 "Buckley Amendment," 1976.

Graham, James R., "An Open Letter to NAFSA Members," NAFSA Newsletter, June 1984.

Henderson, John S., "Computerizing the Study Abroad Office: A Case Study," NAFSA Newsletter, June 1984.

Immigration and Naturalization Service: Student and School Regulations, U.S. Department of Justice, Immigration and Naturalization Service, Form M-242, June 15, 1983.

The Intelligent Woman's Guide to Computer Terms, compiled for CALIFORNIA CONCERNS by Marilyn Baker, 1979.

Lipson, Joseph, "Riding the Wave of the New Information Technologies: The Administrator's Role," EDUCOM Bulletin, Vol. 16, No.4, pp. 7-11, Winter 1981.

Martin, J., An End User's Guide to Data Base, Prentice Hall, 1981.

McCredie, John W., "Campus Information Processing: A New Wave," The Educational Record, Fall 1981.

No Two Alike: The Comparability Question in Foreign Student Admissions, prepared by the American Association of Collegiate Registrars and Admissions Officers for the Agency for International Development, Office of International Training, January 1983.

Open Doors: Report on International Educational Exchange, Institute of International Education. Annual edition.

Privacy Act Implementation Guidelines and Responsibilities, Office of Management and Budget, Circular No. A-108, Federal Register, Vol. 40, No. 132, p. 28947, July 9, 1975. Bi-annual edition.

Profiles: The Foreign Student in the United States, Institute of International Education, 1983.

Resnikoff, Howard L., "Implications of Advances in Information Science and Technology for Institutions of Higher Learning," EDUCOM Bulletin, Vol. 16, No. 1, pp. 2-18, Spring 1981.

Roll, Peter, Technology Trends: Implications for the University of Minnesota, Office of Academic Affairs, University of Minnesota, June 1982.

Science Magazine, February 21, 1982, is devoted to computer and information processing technology. It contains a large number of articles by authorities on the basic science, engineering, and applications of all forms of computer and information processing technology, including projections of future developments.

Sepmeyer, I.H., and Sharp, T.E., "What's His Other Name?" College andUniversity, Spring 1981, p. 191-298.

Supplementary Guidance on Implementing the Privacy Act, Office of Management and Budget, Federal Register, Vol. 40, No. 234, p. 56741, December 4, 1975.

Wirt, E., "What's in a Name? Management of Record Names," College and University, Spring 1969, p. 268-278.

APPENDIX 7
Helpful Organizations

American Association of Collegiate Registrars and Admissions Officers (AACRAO)
One Dupont Circle, N.W., Suite 330
Washington, D.C. 20036
(202) 293-9161

National Association for Foreign Student Affairs (NAFSA)
1860 19th Street, N.W.
Washington, D.C. 20009
(202) 462-2811

Institute of International Education (IIE)
809 UN Plaza
New York, NY 10017
(212) 883-8224

The College Board
Office of International Education
1717 Massachusetts Avenue, N.W.
Washington, D.C. 20036
(202) 332-1480

College and University Machine Records Conference (CUMREC)
University of South Carolina
Computer Services
National Headquarters
1244 Blossom St.
Columbia, SC 29208

College and University Systems Exchange (CAUSE)
737 29th Street
Boulder, CO 80303
(303) 449-4430

APPENDIX 8

Evaluation/Comment Form

The authors of this publication and the members of the Interassociational Committee on Data Collection (ICDC) are interested in your reaction to this document, and invite your candid response. The information you provide will help determine updates and content areas for future publications. Please take the time to complete the form on the following page and return it to:

Interassociational Committee on Data Collection
c/o NAFSA Field Service
1860 19th St., NW
Washington, D.C. 20009

Evaluation / Comment Form

1. Has this document helped you in planning and implementing a data base system for foreign students at your institution?

_____

_____

_____

_____

2. Was this document clearly written and understandable? If not, why?

_____

_____

_____

_____

3. Were there other content areas you would like to have seen covered?

_____

_____

_____

_____

4. Do you have any suggestions for future publications?

_____

_____

_____

_____

5. A. How are domestic student records kept at your institution?

- ☐ Mainframe, centralized system
- ☐ Stand alone system (micro/mini/mainframe)
- ☐ Manual files

B. Foreign student records?

- ☐ Mainframe, centralized system
- ☐ Stand alone system (micro/mini/mainframe)
- ☐ Manual files

6. How many students are enrolled at your institution? _____

Foreign students? _____

7. Please add any other comments you may have (use additional pages if necessary).

_____

_____

_____

_____

Thank You

From

_____

_____

_____

_____

Place
Stamp
Here

Interassociational Committee on Data Collection
c/o NAFSA Field Service
1860 19th St., NW
Washington, D.C. 20009

National Association for Foreign Student Affairs
1860 19th Street, NW, Washington, DC 20009